

**DUF<sub>6</sub>**

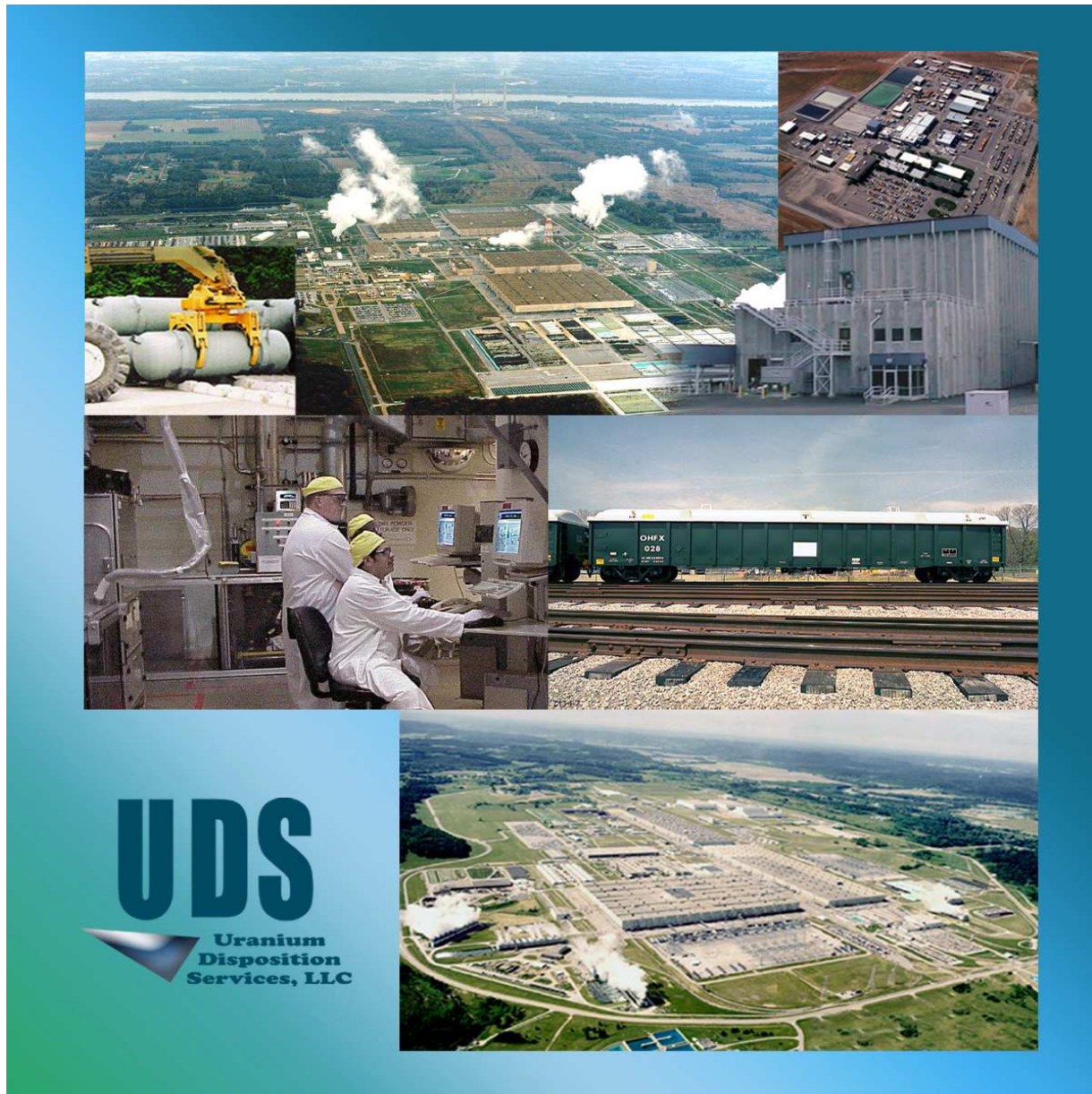
Depleted Uranium  
Hexafluoride  
Conversion Project

DUF6-UDS-PLN-045

Revision 1

JUNE 2005

## PORTSMOUTH EMERGENCY MANAGEMENT PLAN



Uranium Disposition Services, LLC  
Burns and Roe Enterprises, Inc.  
Duratek Federal Services, Inc.  
Framatome ANP, Inc.

U.S. Department of Energy  
Portsmouth, Paducah Project Office  
Paducah Site  
Portsmouth Site

## DOCUMENT REVIEW AND APPROVAL RECORD

Portsmouth Emergency  
Management Plan

DUF6 -UDS-PLN-045

Revision 1

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DOCUMENT REVIEW AND APPROVAL RECORD		
DOCUMENT REVIEWS		
Reviewer (Name, Title)	Signature	Date
John McCoy, Portsmouth Site Manager	<i>(Handwritten Signature)</i>	6/23/05
DOCUMENT APPROVALS		
Approver (Name, Title)	Signature	Date
Evelyn Hayes, Author	<i>(Handwritten Signature)</i>	6/23/05
Michele Griffin, Records Manager	<i>(Handwritten Signature)</i>	6/23/05
Josie Blackmon, Compliance Officer	<i>(Handwritten Signature)</i>	6/23/05
Don Parker, UDS ESH/S Manager	<i>(Handwritten Signature)</i>	6/23/05
Doug Adkisson, UDS O & M Manager	<i>(Handwritten Signature)</i>	6/23/05
Bill Farmer, UDS Quality Manager (Acting)	<i>(Handwritten Signature)</i>	6/23/05
Jill Freeman, UDS Human Resources Manager	<i>(Handwritten Signature)</i>	6/23/05
Tim Forden, UDS Project Manager	<i>(Handwritten Signature)</i>	6/23/05

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# 1 INTRODUCTION

## 1.1 *Purpose of Emergency Plan*

The purpose of the *Portsmouth Emergency Management Plan*, herein referred to as the “emergency plan,” is to provide an overview of the emergency management system implemented on the U.S. Department of Energy (DOE) Portsmouth site, and specifically, at the Portsmouth DUF6 conversion facility during construction, pre-operation phases of the facility and UF<sub>6</sub> cylinder yard operations. The emergency plan satisfies the emergency planning requirements of the following

- 29 CFR 1910.38, Emergency Action Plans
- 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals
- 29 CFR 1910.120, Hazardous Waste Operations, and Emergency Responses
- 40 CFR 112, Oil Pollution Prevention
- 40 CFR 335, Emergency Planning and Notification
- DOE Order 151.1B, Comprehensive Emergency Management System

This emergency plan serves to consolidate the various regulatory and DOE order requirements into one functional emergency response plan or integrated contingency plan. The emergency plan is intended to provide the information and guidance required to analyze, design, and develop the emergency management program of the Portsmouth DUF6 conversion project and to provide a baseline upon which program evaluations will be conducted.

Emergency response services and emergency management program support are provided by the United States Enrichment Corporation (USEC) through a work authorization. UDS personnel shall comply with the site wide emergency management program and emergency plan implementing procedures (EPIPS). This EM plan implements the USEC plan for UDS employees, UDS subcontractors, and their sub-tier employees.

This emergency plan shall be reviewed at least on an annual basis. Revisions required by changes in emergency planning or facility operations will be implemented and published as changes to the emergency plan, or incorporated into the next annual revision.

## 1.2 *Scope*

The emergency plan has been developed to provide a comprehensive description of the emergency preparedness and response to operational emergencies that may occur at the Portsmouth DUF6 conversion facility site during construction, pre-operation activities and UF6 cylinder storage yard operations and under the DOE’s jurisdiction. This plan applies to UDS employees, contractors, and subcontractors performing work at the Portsmouth DUF6 conversion facility site. This plan does not address energy and continuity of government emergencies. Upon completion of conversion facility construction activities and pre-operation activities, this plan will be modified to include the conversion facilities and associated activities.

Off-site transportation accidents involving DOE shipments are considered credible emergency events. This emergency plan does not address responses to off-site transportation accidents since those emergencies fall under the jurisdiction of state

and/or local authorities. PORTS and DOE/DOE contractors will, however, provide technical assistance and information for those off-site transportation incidents involving DOE shipments upon request by the local incident commander (IC).

The emergency plan comprises several comprehensive emergency management concepts such as planning, preparedness, response, mitigation, and recovery operations.

- “Planning” includes the development, and preparation of emergency plans and procedures based on identified hazards and the identification of necessary personnel and resources to provide an effective response.
- “Preparedness” includes the training of personnel; acquisition and maintenance of resources; and exercising of the plans, procedures, personnel, and resources essential for emergency response.
- “Response” represents the implementation of planning and preparedness during an emergency and involves the effective decisions, actions, and application of resources that must be accomplished to mitigate consequences and recover from an emergency.

The scope of the emergency management program and the extent of emergency planning and preparedness required are based upon, and are commensurate with, the hazards and consequences associated with the Portsmouth DUF6 conversion facility and/or its specific operation.

Hazards assessments provide the technical basis for the emergency management program. The extent of emergency planning and preparedness required for a particular facility directly corresponds to the type and scope of hazards present and the potential consequences of accidents or events. It is understood that not every conceivable situation is analyzed; thus, not every response can be pre-planned. However, the existence of adequate hazards assessments, in combination with effective emergency planning and preparedness, provides the framework for response to virtually any operational emergency.

The DUF6 emergency management program is established through emergency plans and procedures to implement the plans and other supporting documents. The emergency plan and facility-specific employee emergency action plans (EAP) provide a clear statement of how the overall emergency management system is integrated. Emergency procedures contain the detailed information and specific instructions for emergency response personnel to implement the emergency plans. Additional supporting documents include, but are not limited to, technical safety manuals, engineering drawings, documented safety analysis (DSAs), Unreviewed Safety Question Determination (USQD), and other related program documents, plans, and assessments.

### **1.3 Concept of Operation**

This emergency plan has been prepared to address emergency events occurring/affecting the Portsmouth DUF6 conversion facility during the construction, pre-operation phases and UF6 cylinder storage yard operations of the DUF6 project. The emergency plan is based on the typical hazards and industrial events that may be associated with the construction of the DUF6 facility. For UF6 cylinder storage

yard operations, the current Emergency Management Hazard Analysis (EMHA) and Emergency Action Levels are being adopted.

A facility emergency planning hazards assessment will be prepared during the construction and pre-operation phases and prior to facility operations, for the Portsmouth DUF6 conversion facility in accordance with the DOE emergency management requirements. The hazard assessment and related documentation (i.e., emergency action levels) will enable site and facility emergency response organizations to correctly assess the consequences of an event, notify emergency response personnel, classify the event, and recommend appropriate protective actions to remediate the situation.

Once prepared, the Portsmouth DUF6 conversion facility emergency planning hazards assessment will document the specific facility events and hazards affecting the population and facility operations at the Portsmouth site, and the general public offsite. The hazards assessment will include an identification of the types and quantities of hazardous materials used or stored at the facility. In addition and as stated above, the assessment will provide an analysis of potential accidents that might require protective actions onsite and offsite.

#### **1.4 Site Description**

##### **1.4.1 Description of the Portsmouth DUF6 Conversion facility**

The DUF6 conversion project will convert DOE's existing DUF6 inventory, consisting of approximately 700,000 metric tons (MT) contained in about 63,300 cylinders currently located at the Paducah and Portsmouth Gaseous Diffusion Plants (GDP) and East Tennessee Technology Park (ETTP) to a more stable form, (uranium oxide, predominantly  $U_3O_8$ ). The scope of the project includes the design and construction of conversion facilities at both Paducah and at Portsmouth, the operation of these facilities to provide for the conversion of the DUF6 inventory for disposition as applicable. In addition, the project includes management of DOE's inventory of DUF6, low-enriched uranium (LEU) hexafluoride ( $UF_6$ ), natural assay  $UF_6$ , and heel and empty cylinders and the maintenance of inventory records. The estimated duration of the conversion is ~18-years.

The selected process is the UDS dry conversion method. The method incorporates a continuous process in which DUF6 is vaporized and converted to uranium oxide in a fluidized bed conversion unit. The resulting powder is collected and packaged for disposition. The process equipment is arranged in parallel lines, each line consisting of two autoclaves, two conversion units, a hydrogen fluoride (HF) recovery system, and process off-gas scrubbers. Equipment will also be installed to collect the HF by-product and transform it into marketable products. The emptied cylinders are stabilized to reduce the unneutralized fluorides and aged to reduce the Th-234 activity to meet as low as reasonably achievable (ALARA) requirements. The emptied cylinders will have flanges attached to them and if found acceptable for use as a waste container, they then will be used as shipping containers for the uranium oxide. Smaller or unacceptable cylinders will be sent to disposal at an approved off-site waste disposal site.

The Portsmouth DUF6 conversion facility is located on the PORTS site. The conversion facility site is located near the PORTS main entrance highway on the western side of the Portsmouth site.

#### 1.4.2 Description of Portsmouth DOE Reservation and Area Near the Reservation

DOE's mission on the Portsmouth DOE reservation is: the restoration of the environment at or around the PORTS; environmental management by protecting and enhancing the environment; waste management through waste minimization, treatment and disposal; uranium programs, inclusive of DUF6 cylinder management; and decontamination and decommissioning facilities and equipment in a safe and cost-effective manner.

The Portsmouth DOE site is a DOE owned 3,714-acre reservation located in rural Pike County in south-central Ohio. The area was previously farmland and is the watershed for several intermittent streams.

The most visible features on the reservation are part of the PORTS, a uranium enrichment facility leased by the USEC from the DOE that is situated on a facility controlled security fenced 800-acre area approximately in the center of the reservation. The primary mission of the PORTS is the enrichment of uranium for nuclear reactor fuel. PORTS includes three major process buildings, a series of electrical switchyards, storage areas, cooling towers, a steam facility, water treatment facility, sewage disposal facility and pollution abatement facility, service and maintenance buildings, and facilities for administration, medical, fire, and security.

Immediately east of PORTS, the surface gently slopes upward to a more or less rolling plateau having elevations of 770 to 780 feet. Hills 1.5 miles east of PORTS reach elevations between 1,000 and 1,100 feet. Elevations for several miles around the site vary from 500 feet in some lowlands to about 1,100 feet in higher ridges and hills.

No U.S. or state highways enter the DOE reservation. Vehicular traffic can enter the reservation from all four sides through a variety of access roads that intersect the PORTS perimeter road. The CSX Railway provides rail access to PORTS. This CSX line intersects rail lines supported by CSX and the Norfolk Southern Railway. Although PORTS once maintained a landing strip for air transportation, the strip is now maintained as a helicopter pad that is used infrequently. The conversion facility will be connected by a spur to the CSX switch for regular rail traffic, primarily during the operations phase of the project.

The areas adjacent to the site are largely agricultural with a relatively low population density. Agricultural and forested land accounts for approximately 90% of the area surrounding the reservation. The remaining 10% is taken up by industrial, commercial, and residential land use. The site is in a rural, low population area, well separated from high-density, high growth-rate areas that might complicate emergency preparedness efforts.

An emergency planning area, known as the immediate notification area, established by agreement with Pike County and State of Ohio officials, is used as a tool to aid in warning offsite populations of events with potential health or safety impact. The immediate notification area, which extends approximately two miles from the center of the site, is wholly within Pike County.

There are no unrelated industrial, commercial, institutional or residential structures within the reservation with the exception of the PORTS that is leased from DOE by

USEC. There are no military installations located near the site. There are no installations or facilities, such as schools, nursing homes, prisons, etc., located in the immediate area surrounding the reservation that would require special precautionary measures for implementing protective actions offsite.

## **2 EMERGENCY RESPONSE ORGANIZATION**

### **2.1 *Organization Structure***

UDS provides construction management services to DOE for the day-to-day construction and management of the Portsmouth DUF<sub>6</sub> conversion facility activities. The UDS resident construction manager is responsible for the day-to-day overall management of facility construction activities. The UDS DUF<sub>6</sub> conversion plant manager is responsible for management of the Portsmouth DUF<sub>6</sub> conversion facility pre-operation activities and DOE UF<sub>6</sub> Cylinder Storage Yards. During construction, pre-operation activities and cylinder yard operations UDS administrative, technical support, construction personnel and cylinder yard personnel are normally on-site daily, Monday through Friday, holidays excluded.

DOE provides oversight for those activities involving the conversion facility construction, pre-operation activities and cylinder storage yard operations. Events involving DOE operations or assets are reported to DOE Oak Ridge Operations Center (OROC) and the DOE Portsmouth-Paducah Project Office (PPPO) in Lexington, Kentucky.

As defined in the work authorization between UDS and USEC, the USEC plant shift superintendent (PSS) serves as the UDS designated representative on the off-shift. Each of the four rotating PORTS shifts includes a Plant Shift Superintendent (PSS) and facility field emergency response personnel in their organizational makeup. The facility field emergency response organization, a team of highly trained employees, representing various areas and functional organizations of the PORTS shift organization, responds to emergency situations on the Portsmouth DOE reservation. The field emergency response personnel are trained and function under the direction of the PSS during emergency conditions.

The PSS may assume the role of Incident Commander (IC), or assign an individual qualified as IC, during an emergency situation in order to protect personnel, essential operations, and government property from fire, chemical, and other hazards.

In addition to overseeing facility activities on the off-shift, the PSS is responsible for making proper notifications and classifying emergencies in accordance with emergency plan implementing procedures.

### **2.2 *Emergency Direction and Control***

Emergency response facilities on the Portsmouth DOE site are staffed by PORTS personnel, primarily USEC responders. The PORTS emergency response organization is divided into functional groups, such as field emergency response organization (on-scene responders), EOC Cadre (management and technical support), and Joint Public Information Center (JPIC).

Members of these groups are assigned to emergency facilities such as the emergency operations center (EOC) and on-scene/field based organizations. Emergency response organization assignments correspond as closely as possible to

daily duties. Primary and alternate personnel are assigned to key emergency response organization positions. Assignments are updated periodically. Management emergency response organization positions in each group provide oversight and final authority in the group's decision-making process.

The initial emergency response organization consists of the USEC Fire Services, Protective Forces with the PSS, or designee, as IC. Upon assessment of the event, and if conditions warrant, the event will be classified as an alert or site area emergency by the PSS assuming the role as event Crisis Manager (CM). If the site EOC is activated for an event and declared operational, the PORTS general manager, or designee, relieves the PSS as CM and the overall control of the emergency shifts from the PSS to the CM in the EOC. If the EOC is not activated, the PSS maintains responsibilities of CM until the event is terminated.

Transition and turnover of command and control authority and responsibility of the CM by the PSS is conducted in a formal manner by use of specially developed procedural checklists and, if possible, face-to-face briefings. Primary and alternates are identified for the key EOC positions.

The order of succession for the site's CM's position is as follows:

- PSS
- USEC general manager
- USEC plant manager
- Others as designated by the USEC general manager, trained and qualified as CM

Because of the importance of some emergency responsibilities, these responsibilities may be performed only by the emergency response organization position assigned to address them. The following responsibilities are transferred when the overall responsibility for emergency response is transferred.

Emergency Classification — Initially this is a PSS responsibility as CM. Once the EOC is operational, this responsibility is transferred from the PSS to the CM in the EOC.

Protective Action Recommendations — This is a PSS responsibility as CM. When the EOC is operational, approval of offsite Protective Action Recommendations is transferred to the CM located in the EOC.

Facility Activation — The PSS, or designee, is responsible for directing activation of the EOC. The EOC is automatically activated for declared emergencies [i.e., alert and site area emergency (SAE)], and may be selectively activated for other emergency events.

## **2.3 Emergency Response Operations**

Upon recognition of an emergency at the UDS site, UDS personnel, including UDS subcontractor personnel, will notify the USEC PSS of the event. When notified of an incident at the UDS site requiring USEC emergency response, the USEC PSS, or designee, responds to the incident scene as the IC. The IC determines appropriate immediate protective actions to be implemented at the incident scene and near-by areas as necessary. The PSS classifies the event if applicable. If the emergency is

classified as either an alert or SAE, the PSS, as CM, activates the EOC. The PSS or designee, such as the Assistant PSS, as offsite communicator, in the plant control facility (PCF), is responsible for implementing call-out of the EOC staff and appropriate UDS response personnel, as necessary, offsite emergency notifications, and technical communications with offsite government authorities.

Capability for onsite emergency response is provided by the USEC field emergency response organization consisting of the following:

- PSS personnel
- Protective force personnel
- Fire services personnel
- Emergency squad personnel, as requested
- Local emergency director.

Fire services personnel are trained in firefighting, hazardous materials (HAZMAT) response, emergency medical treatment, and health physics/radiation protection. Facility emergency squad personnel are trained in basic fire fighting response.

The site EOC cadre provides the external support required by the IC and on-scene emergency response organization and provides information to federal, state, and local governmental agencies. Specifically, the EOC provides additional technical expertise in engineering, radiological/hazardous materials monitoring and assessment, logistics support such as transportation, food, communications, materials and supplies, and other needed services. Responsibilities of key USEC, DOE, and UDS EOC positions are described below:

- 2.3.1 Crisis Manager (USEC)
  - 2.3.1.1 Maintains overall strategic management of emergency incident response
  - 2.3.1.2 Maintains management of non-incident scene activities during an emergency incident
  - 2.3.1.3 Provides coordination and leadership for the EOC cadre
  - 2.3.1.4 Defines the classification of all emergencies after the activation of the EOC
  - 2.3.1.5 Reviews and approves all offsite protective action recommendations
  - 2.3.1.6 Ensures emergency notifications are made to onsite and offsite personnel
  - 2.3.1.7 Reviews and approves PORTS/USEC information releases to the media
  - 2.3.1.8 Coordinates strategic planning for the emergency incident response
  - 2.3.1.9 Conducts periodic briefings for the EOC cadre
- 2.3.2 Production Support Advisor (USEC)
  - 2.3.2.1 Advises the CM on the radiological/hazardous materials assessments and environmental concerns and related response activities
  - 2.3.2.2 Advises the CM on protective action recommendations
  - 2.3.2.3 Coordinates the efforts of the Environmental Safety & Health organization in responding to the needs of the on-scene emergency response forces

- 2.3.2.4 Advises CM on medical activities such as notification and coordination of offsite medical facilities and medical activities and injuries
- 2.3.3 Plant Services Advisor (USEC)
  - 2.3.3.1 Advises the CM on activities concerning:
    - Mutual aid/offsite agency support
    - Accountability
    - Site security status
    - Logistics support
- 2.3.4 DOE Site Office Lead
  - 2.3.4.1 Provides oversight and guidance to the CM and UDS on DOE positions and policies relative to the emergency incident
  - 2.3.4.2 Communicates significant strategic emergency incident information to DOE personnel located in both Oak Ridge and in Lexington
  - 2.3.4.3 Reviews and approves emergency public information and press releases for DOE site activities, including UDS operations
    - If the emergency incident involves a UDS activity then:
- 2.3.5 UDS DUF<sub>6</sub> Conversion Plant Manager, or designee
  - 2.3.5.1 Advises the CM on UDS site/technical issues relative to the emergency incident
  - 2.3.5.2 Coordinates UDS activities and operations in support of the emergency
  - 2.3.5.3 Reviews and approves UDS emergency public information and press releases
  - 2.3.5.4 If a UDS facility/site emergency, appoints a recovery manager and oversees recovery operations, as appropriate
- 2.3.6 UDS DUF<sub>6</sub> Conversion Plant Adviser
  - 2.3.6.1 Supports activities by assessing UDS facility damage
  - 2.3.6.2 Advises the UDS DUF<sub>6</sub> Conversion Plant Manager on the impact of the incident on UDS operations and facilities
  - 2.3.6.3 Interfaces with the USEC EOC cadre members regarding health and safety concerns, such as protective actions, etc
  - 2.3.6.4 Assists the UDS DUF<sub>6</sub> Conversion Plant Manager in determining effects to UDS site personnel and facilities from the emergency incident
  - 2.3.6.5 Assists the UDS DUF<sub>6</sub> Conversion Plant Manager in support of emergency public information development relating to the emergency events impacting UDS facility operations/activities
  - 2.3.6.6 Assists the UDS DUF<sub>6</sub> Conversion Plant Manager in recovery planning
    - The JPIC is normally activated for events that may generate significant interest from the media, and automatically for events declared as a site area emergency. This organization provides for timely information dissemination to the media and public regarding facility emergencies. The emergency public information program is

described in Section 10.0, Public Information. USEC and other contractor personnel staff JPIC positions in support of a DOE emergency requiring JPIC activation. However, a UDS spokesperson will be staffed by UDS and/or DOE personnel and will be responsible to the DOE site office lead and the UDS DUF<sub>6</sub> Conversion Plant Manager for emergency information dissemination regarding DUF<sub>6</sub> events to the media.

The UDS spokesperson will act as UDS/DOE's designated spokesperson at the JPIC. The spokesperson will conduct media briefings and follow-up interviews as required and coordinate response to requests for conversion facility event information.

At the facility level, UDS has designated a facility/area LED and emergency wardens to provide assistance to UDS employees, subcontractors, and visitors during emergency situations involving the UDS facility/area and to interface with site emergency response personnel, i.e., USEC IC regarding facility and personnel status. The responsibilities and response actions of the facility LED and emergency wardens are outlined in *Portsmouth Facility/Employee Emergency Action Plan*.

### **3 OFFSITE RESPONSE INTERFACES**

#### **3.1 Overview**

The severity of some emergencies may warrant the utilization of offsite individuals, organizations, and agencies. As a result, letters of agreement have been entered into with offsite groups to provide assistance in the event of an emergency situation at the Portsmouth DOE reservation. These support services encompass areas such as medical assistance, fire control, evacuation, ambulance services, and law enforcement. When the USEC PSS or CM determines that offsite assistance is needed, the appropriate organization is notified and assistance is requested. The site protective force personnel provide site access control and ensure escort support is provided, as needed, for the responding offsite organizations. Necessary emergency information will be provided to the responding organizations, including potential hazards associated with the incident.

The offsite emergency support organizations are described in the following subsections.

##### **3.1.1 Medical Support**

In certain instances, medical emergencies may require the transport of an injured person from the Portsmouth DOE reservation to an offsite medical facility. Transportation of injured persons to the medical facility is normally provided by the site's onsite ambulance. In the event the onsite ambulance is not available, the Pike County Emergency Medical Service provides the transportation of injured persons to the offsite medical facility. This includes contaminated injured onsite workers. Ambulances are equipped with radios to maintain communications with the local hospitals. The primary medical facilities for injured personnel, with or without contamination, are the Pike Community Hospital, Southern Ohio Medical Center, and Medical Center Hospital. These hospitals have agreed to accept injured personnel and/or victims of radiation/hazardous materials-related accidents for emergency medical and surgical treatment and observation. Notification of these hospitals of the

need for offsite assistance is performed by telephone or radio by USEC emergency response personnel.

#### 3.1.2 Fire Support

When a determination that offsite fire support is needed, the applicable offsite fire departments are alerted. Notification of offsite fire fighting assistance is made by means of a telephone call or radio transmission to the Pike County Sheriff's Office.

The offsite fire departments include the Beaver Fire Department, Benton Township Fire Department, Camp Creek Fire Department, Elm Grove Fire Department, Jackson Township Fire Department, Pebble Township Fire Department, Pike Forest Fire Department, Piketon-Seal Township Fire Department, Scioto Township Fire Department, Stockdale Fire Department, and Waverly Fire Department. These fire-fighting groups have agreed to furnish the site with fire fighting personnel and necessary resources upon request. The fire services are under the direction and control of the USEC PSS, or designee, who retains responsibility for the overall on-scene emergency response effort. In instances where offsite fire fighting assistance is needed to fight a fire involving radioactive/hazardous materials, knowledgeable members of the site's ERO provide radioactive/hazardous materials, radiological/toxicological information and assistance.

#### 3.1.3 Law Enforcement Assistance

The nature of an emergency at the Portsmouth DOE reservation may require that the local law enforcement agencies be activated to assist in the emergency response effort. The Pike County Sheriff provides local law enforcement assistance through a written agreement. The emergency support may include:

- Furnishing personnel and equipment as necessary to supplement the site's protective force
- Controlling access to areas affected by the emergency
- Directing area evacuation
- Responding to bomb threats

### 3.2 ***Coordination with Participating Government Agencies***

The close coordination between the local, state, and site emergency plans serves to better ensure the safety and health of the general public. It also enables all emergency organizations to participate in the emergency effort with a minimum of confusion and hesitation. During an emergency effort, participating agencies must have a clear picture of their responsibilities, which is provided for in their respective emergency plans and procedures.

USEC coordinates required emergency planning activities directly with these organizations and agencies for the DOE Portsmouth Reservation. USEC emergency management personnel meet at least annually with each offsite response organization to review emergency plans and procedures and any changes relevant to the site's emergency management program. Site emergency action levels, notifications, and the overall response coordination process are discussed at these meetings. Any changes in emergency planning agreements between the offsite organizations and the site are coordinated with the DOE site office and DOE contractor organizations.

Response roles of the key agencies are summarized below.

**3.2.1 State of Ohio Government Interfaces**

The State of Ohio's Emergency Response Annex for Events at DOE Facilities provides guidance on dealing with all types of disasters or emergency incidents and outlines the state response to incidents at the Portsmouth DOE site. The Ohio Emergency Management Agency (EMA) is responsible for coordinating overall state response and overseeing the local implementation of recommended protective actions. The EMA also assists the Governor in formulating policy, establishing priorities, gathering and analyzing information, monitoring the execution of planned actions, and directing modifications as necessary. The Ohio State Highway Patrol provides support to offsite law enforcement agencies as requested. The Ohio Department of Health coordinates hazards assessment and is the principal contact for technical information and recommendation of protective actions. The Ohio EPA oversees removal and disposal of hazardous waste generated as a result of a Portsmouth facility emergency.

The State of Ohio has a permanent EOC that has been designed and equipped to be the direction and control center for all major emergencies in the state. The EOC is manned 24 hours a day by operations duty officers and has the capability to provide almost instantaneous communications with key state officials.

**3.2.2 Local Government Interfaces**

The Pike County commissioners have overall responsibility and authority for conducting county emergency responses and exercises. They serve as the officials-in-charge during an emergency and are supported by the county EOC staff. The County EOC is at the Pike County Airport two miles north of Waverly, Ohio, which is approximately seven miles north of the PORTS site.

The Pike County EMA director serves as the chief of staff for the county EOC staff. The director is responsible for ensuring that the EOC is fully functional. In addition, the director is responsible for coordinating local government emergency management planning and response activities.

The Pike County commissioners and Pike County EMA director can authorize the opening and staffing of the county EOC. The EOC may be open and staffed due to the threat of an emergency or because of an actual emergency. Minor emergencies may be directed by agency officials from their normal workstations.

Pike County authorities can also authorize the opening and staffing of the JPIC to ensure that the public and media can obtain information during an emergency. Rumor control measures are addressed in specific USEC emergency procedures.

Local law enforcement and fire services assistance is coordinated with the director and staff in the county EOC.

Notification and warning points have been established for each local government entity. Local governments coordinate response efforts from the Pike County EOC.

**3.2.3 Federal Government Interfaces**

**3.2.3.1 DOE**

DOE provides nuclear safety oversight for those activities on the DOE reservation involving DOE facilities and operations. Additionally, DOE provides control and oversight of activities involving uranium enriched to greater than 10% <sup>235</sup>U. Events involving DOE operations or property are reported to DOE's OROC and Lexington, Kentucky office. DOE maintains various emergency response assets capable of providing radiological monitoring and support assistance during an emergency.

3.2.3.2 Federal Bureau of Investigation

The Federal Bureau of Investigation (FBI) has jurisdictional authority at the Portsmouth DOE reservation for safeguards and security events involving violations of federal criminal law. A representative of the FBI may assume command and control of these types of incidents. The FBI will coordinate all responding federal law enforcement agencies.

3.2.3.3 Federal Aviation Administration

The Federal Aviation Administration restricts airspace over the Portsmouth site at the request of the CM or the PSS, as appropriate.

3.2.3.4 Federal Emergency Management Agency

The Federal Emergency Management Agency is the primary federal government agency for the administration of planning, preparedness, operational coordination, and recovery programs.

3.2.3.5 U. S. Environmental Protection Agency

The U. S. Environmental Protection Agency (USEPA) is the major federal government agency for the regulation and control of pollution and waste management programs. USEPA provides the federal on-scene coordinator for significant hazardous materials incidents.

3.2.3.6 U. S. Occupational Safety and Health Administration

The U. S. Occupational Safety and Health Administration (OSHA) is the primary federal government agency for the regulation of non-radiological worker safety.

## 4 EMERGENCY CATEGORIZATION & CLASSIFICATION

The technical basis for an emergency management program is derived from the assessment of hazards associated with a facility's operations. Emergency response planning at the Portsmouth DUF6 Conversion facility is based on the potential facility's hazards and consequences associated with the hazards. During the construction phase of the conversion facility, the facility's hazards and accidents are similar to other industrial construction sites.

The types of emergency situations that could occur at the conversion facility include, but are not limited to the following:

- Fires
- Industrial accidents
- Equipment failures or miss operation
- Diesel/oil spills and other environmental releases
- Natural phenomena (e.g., tornadoes, earthquakes, severe weather storms, etc.)

- Security-related events (e.g., bomb threats, demonstrations, work place violence, etc.)

Conversion facility construction activities do not include the storage or use of radioactive or hazardous materials at the construction site. However, on a scheduled date and during the construction phase, UDS will assume responsibility for all DOE UF<sub>6</sub> cylinder yard operations and maintenance activities. Once the cylinder yard responsibilities are assumed by UDS, all cylinder yard hazards and related emergency management and response activities will become the responsibility of UDS.

Prior to the operation of the conversion facility and the assumption of DOE cylinder yard responsibilities, hazards applicable to the facility and yards will be identified and documented. Each potential accident and hazard which could result in an emergency situation will be analyzed to establish the potential of affecting workers, the public, the environment, and property. When additions or deletions are made to any of these documents, corresponding hazards analyses, elements of emergency planning and preparedness, and consequence assessments are reviewed to ensure that the emergency management program is updated and current.

#### **4.1 Descriptions of Emergency Classes**

Operational emergencies are unplanned, significant events or conditions that require time-urgent response from outside the immediate/affected site/facility or area of the incident. Such emergencies are caused by, involve, or affect DOE facilities, sites, or activities and represent, cause, or have the potential to cause the events or conditions described below. Incidents that can be controlled by UDS facility employees in the immediate/affected facility or area are not operational emergencies. Incidents that do not pose a significant hazard to safety, health, and/or the environment and that do not require a time-urgent response by emergency response personnel are not operational emergencies. The purpose of categorizing events as operational emergencies and of classifying hazardous material events ensures rapid recognition of emergency conditions and timely response.

Emergencies are significant accidents, incidents, events, or natural phenomena that have, or can potentially, seriously degrade the safety or security of the conversion facility. Emergencies are further divided into classes by degree of severity depending on the actual or potential consequence of the emergency situation. DOE Order 151.1B indicates different classifications of operational emergencies.

Since USEC, a private corporation governed by the Nuclear Regulatory Commission (NRC), provides site-wide emergency response services to DOE on the Portsmouth site, the emergency classification levels used at the site are different from those defined in the DOE regulations. The Portsmouth DOE site office received direction from the assistant manager for Enrichment Facilities, DOE Oak Ridge Operations on January 30, 1997, to implement USEC's emergency classification system described in the NRC 10 CFR 76.91 regulations for gaseous diffusion facilities. Prior to receiving this direction, two different emergency classification systems were being implemented on the Portsmouth DOE reservation: 1) the NRC two-class system, as defined in 10 CFR 76.91, implemented by USEC for the leased PORTS facilities, and 2) the DOE three-class system (Alert, Site Area Emergency, and General Emergency), required by DOE Order 151.1B, for the DOE non-leased facilities. The

direction assigned by DOE Oak Ridge allowed for emergencies on the Portsmouth DOE reservation, regardless of ownership, to be classified by the USEC PSS using a single classification system.

The site classification levels are a composite of the two classification systems, both DOE and NRC. The variation utilized herein is consistent with NRC regulations and maintains compliance with DOE requirements as agreed to by DOE (Parks 1997). The NRC classification system does not use the general emergency classification; an alert signifies an event with onsite consequences and the SAE signifies an event with offsite consequences. Therefore, an alert is defined as an event exceeding PAC at or beyond 30 m but not at or beyond the site boundary and a SAE is defined as an event exceeding PAC at or beyond the site boundary.

The emergency classification system provides for the notification and implementation of actions immediately applicable to a specific emergency condition, and for upgrading or terminating the response accordingly in the event of a change in the severity of the condition. These actions are further described in the following sections.

An "alert" is defined as an incident that has led or could lead to a release to the environment of radioactive or other hazardous material. Such a release is not expected to require a response by an offsite response organization to protect the general public offsite. An alert involves emergency situations that could have a direct effect on the health and safety of personnel onsite. Upon classification of an emergency as an alert, the facility emergency response organization is activated and key offsite authorities are notified. An alert also addresses limited releases of radioactive and/or hazardous material and might require some onsite monitoring and assessment actions by the facility response organization. Classification of an emergency as an alert will ensure that appropriate onsite, offsite, and DOE personnel are properly advised and available for activation with appropriate resources if the situation becomes more serious.

The most severe classification used in emergency planning at the Portsmouth site is the SAE. An SAE is defined as an incident that has led or could lead to a significant release to the environment of radioactive or other hazardous material. Such an incident could require response by an offsite organization to protect persons off the Portsmouth DOE reservation (offsite).

An SAE could result in offsite releases that exceed the Environmental Protection Agency (EPA) PAGs for radiological releases or ERPGs for toxic materials releases. Classification of an emergency as a SAE requires the activation of the onsite emergency response organization, including the EOC cadre, and other appropriate personnel and resources as necessary to mitigate the consequences of emergency conditions, monitor the situation, and ensure protection of onsite and offsite personnel. The nature of SAE requires prompt protective actions for onsite personnel near the incident area and may require protective response measures for major portions of the DOE reservation. Immediate protective actions offsite are not always required upon an SAE classification. However, preliminary steps are initiated in anticipation of possible protective actions. These preliminary steps include completely activating the onsite emergency response organization, alerting or mobilizing field monitoring teams, and notifying appropriate offsite authorities.

Portsmouth DUF6 Conversion facility operational emergency events that do not meet the criteria for an alert or SAE under this system are not formally classified, but are responded to by facility emergency response personnel, and are reported through UDS reporting and notification procedures for UDS events. Although these non-classified events do not require the activation of additional emergency response resources, the USEC PSS, in consultation with UDS site management, may request activation of the site EOC in support of the emergency at their discretion.

The following discussion provides examples and criteria for operational emergencies applicable to the conversion facility that do not require further classification (i.e., alert or SAE).

#### **4.2 Health and Safety Events**

The following events or conditions represent, cause, or have the potential to cause serious health and safety impacts to workers or members of the public.

- Radioactive or other hazardous material contamination that is causing or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria
- An offsite hazardous material event not associated with DOE operations that is observed to have or is predicted to have an impact on a DOE site such that protective actions are required for onsite DOE workers
- An occurrence that causes or can reasonably be expected to cause significant structural damage to DOE facilities, with confirmed or suspected personnel injury or death or substantial degradation of health and safety
- Any facility evacuation in response to an actual occurrence that requires time-urgent response by specialist personnel, such as hazardous material responders or mutual aid groups not normally assigned to the affected facility
- An unplanned nuclear criticality resulting in actual or potential facility damage and/or release of radioactive material to the environment
- Any non-transportation-related mass casualty event

#### **4.3 Environment**

The following events or conditions represent, cause, or have the potential to cause serious detrimental effects on the environment.

- Any actual or potential release of hazardous material or regulated pollutants to the environment, in a quantity greater than five times the reportable quantity (RQ) specified for such material in 40 CFR 302, that could result in significant offsite consequences such as major wildlife kills, wetland degradation, aquifer contamination, or the need to secure downstream water supply intakes
- Any release of greater than 1000 gallons (24 barrels) of oil to inland waters, greater than 10,000 gallons (238 barrels) of oil to coastal waters, or a quantity of oil that could result in significant offsite consequences (e.g., need to relocate people, major wildlife kills, wetland degradation, aquifer contamination, need to secure downstream water supply intakes, etc.). (Oil, as defined by the Clean Water Act [33 U.S.C. 1321], means any kind of oil and includes petroleum.)

#### **4.4 Security and Safeguards**

The following events or conditions represent, cause, or have the potential to cause degradation of security or safeguards conditions with actual or potential direct harm to people or the environment.

- Actual unplanned detonation of an explosive device or a credible threatened detonation resulting from the location of a confirmed or suspicious explosive device
- An actual terrorist attack or sabotage event involving a DOE site/facility or operation
- Kidnapping or the taking of hostage(s) involving a DOE site/facility or operation
- Actual theft or loss of a Category I or II quantity of special nuclear materials (SNM) or other hazardous material that, if released, could endanger workers, the public, or the environment
- Damage or destruction of a site or facility by natural or malevolent means sufficient to expose classified information to unauthorized disclosure

#### **4.5 Offsite DOE Transportation Activities**

The following events or conditions represent an actual or potential release of radiological or non-radiological hazardous materials from a DOE shipment.

- The radiation dose from any release of radioactive material or the concentration in air from any release of other hazardous material is expected to require establishment of an initial protective action zone. ("Initial protective action zone" is defined in DOT NAERG, as amended or updated, *North American Emergency Response Guidebook*)
- Failures in safety systems threaten the integrity of a nuclear weapon, component, or test device
- Damage to a nuclear explosive, nuclear explosive-like assembly, or Category I/II quantity of SNM as a result of a transportation accident.

#### **4.6 Emergency Action Levels**

Emergency Action Levels (EALs) are used to provide indication that an initiating condition exists. EALs are composed of a combination of facility parameters (such as instrument readings and alarms) that can be used to give relatively quick indication to the facility staff of the severity of the accident situation. The purpose of the EALs is to provide the earliest possible indication of actual or potential accident situations. EALs associated with radiological and/or non-radioactive hazardous materials releases are related to the Environmental Protection Agency's Protective Action Guides (PAGs) summarized in EPA 400-R-92-001, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*, and the Emergency Response Planning Guides (ERPGs) established by the American Industrial Hygiene Association for extremely hazardous chemicals. A determination by the emergency response organization of the potential of reaching or exceeding the PAGs and/or ERPGs is performed in accordance with dose assessment procedures in the event of a radiological/hazardous materials release to the environment.

EALs have not been developed for the Portsmouth DUF6 Conversion facility since no radiological or other hazardous materials are being stored or used at the construction site. However, once UDS assumes responsibility for the DOE cylinder yards, EALs

developed through the emergency management hazards assessment (EMHA) document for the cylinder yards will become the responsibility of UDS. In addition, prior to conversion facility operations, EALs will be developed to address the spectrum of accidents analyzed in the conversion facility EMHA.

Since USEC provides primary emergency response services across the Portsmouth DOE site, all site EALs are contained in the USEC emergency plan implementing procedure for emergency classification. All UDS facility EALs will be submitted to USEC for inclusion in the site's emergency classification procedure.

## **5 NOTIFICATIONS AND COMMUNICATIONS**

### **5.1 Notification**

The initial step in declaring an emergency is to recognize that an unusual condition exists or has the potential for existing. The site's EALs and operational emergency guidelines, as described in Section 4.2, provide the criteria for determining when an abnormal situation exists that require the declaration of an emergency and the subsequent activation of the applicable portions of the emergency response organization.

Upon classification of an emergency, the USEC PSS, as CM, or designee, is responsible for emergency notifications and activates the appropriate portions of the emergency response organization. During normal working hours, emergency response personnel are immediately notified of the emergency by telephone, pagers, and/or facility public address system. Emergency personnel report to their designated emergency response locations/facility immediately following the emergency notification while other facility personnel follow instructions as provided by the PSS, or designee. Outside of normal working hours, emergency response personnel are notified by telephone and/or pager and directed to respond to their respective emergency response facilities.

All facility personnel, including contractors and visitors, receive training regarding alarm response and instructions.

If the event requires a formal declaration of an emergency, i.e., alert or SAE, the CM, or designee, conducts initial emergency notifications to offsite authorities as soon as possible, within 15 minutes of emergency declaration. Additional emergency information is provided to offsite authorities periodically as new information becomes available. Notifications to offsite authorities will be provided when a change in emergency classification occurs and when protective action recommendations offsite are required. USEC has developed a pre-formatted form used for offsite notifications and is included in the USEC emergency plan implementing procedure for emergency notifications. Copies of the notification form are available in the site and offsite emergency response centers. The notification form was developed in cooperation with offsite officials and is reviewed periodically for necessary changes.

Information provided in emergency notifications to offsite authorities include facility status conditions, radiological/hazardous materials release data, recommendations for protective actions to be implemented by offsite response organizations, and other applicable emergency information as necessary. Protective response actions offsite are the responsibility of government authorities. Offsite protective action recommendations are discussed in Section 7.

The USEC PSS, as CM, ensures that DOE, state, and local agencies listed below, at a minimum, are notified within 15 minutes of the initial emergency declaration:

- Pike County Emergency Management Agency director,
- Pike County Sheriff's Office/Local Emergency Planning Committee
- Ohio Emergency Management Agency
- DOE - Oak Ridge Operations Center

## **5.2 Communications**

This section describes the communications systems in place to support emergency response on the Portsmouth DOE reservation. The communications systems are designed to ensure the reliable, timely flow of information and action directives between all parties having jurisdiction and a role to play in the mitigation of emergencies on the DOE reservation.

Reliability is provided via (1) extensive redundancy, (2) dedicated communication equipment to preclude delays due to system overload, and (3) routine use and testing of many of the systems, which lowers the probability of undetected system failures.

The essential communications links are manned continuously and are periodically tested to assure availability. The PSS has full command and control of all communications equipment. The communications systems in place are described below.

### **5.2.1 Onsite Communications**

Telephone and radio systems serve as the primary emergency communications systems. Maintenance and operational testing of primary and alternate communications systems are described in Section 12. Below are descriptions of the onsite communication systems at the Portsmouth site.

### **5.2.2 Telephone Systems**

The administrative telephone system provides business and emergency communications. EOC phones are tested periodically by the USEC emergency management group. The telephone system consists of single line, multi-line, and programmable digital units.

Cellular telephone service is available from the site. Certain emergency response vehicles are equipped with cellular telephones and emergency response personnel also have access to other cellular telephones. This system also provides backup for the facility telephone system.

### **5.2.3 Public Address (PA) System**

A site-wide PA system is in place with capability to cover most occupied site buildings and surrounding areas. During emergencies, the system is not used for routine traffic. The system is tested daily. Two-way radios, telephones, and runners are used to communicate with areas not covered by the PA system.

### **5.2.4 Radio Systems**

Radio systems that support emergency response include system title, call sign, frequencies, and locations. Radio systems for the most part are effectively utilized on a daily basis throughout the site and problems are addressed as they occur. Operational console checks and quarterly drills are used to test the systems. Radio net communications are recorded 24 hours a day.

Some site radio frequencies are compatible with offsite frequencies and are capable of supporting emergency communications between onsite emergency responders and offsite mutual aid organizations.

#### 5.2.5 Pager System

Key EOC personnel have pagers that provide access from any tone-type telephone and can relay return telephone numbers or coded responses to the holder of the unit. Pagers are used frequently for non-emergency use, which enhances the regular testing program.

#### 5.2.6 Facsimile Machines

The facsimile machines located in the EOC are used to communicate with response organizations, including federal, state, and local agencies.

### 5.3 **Offsite Communications**

The site uses the commercial telephone system for offsite emergency communications. Cellular telephones and the facility radio system can be used as a backup to the commercial telephone system.

The Public Warning System (PWS), consisting of outdoor warning sirens and emergency alert system announcements, is used to provide emergency notification. Inaudible testing of the PWS sirens occurs on a monthly basis, and audible testing is conducted semiannually.

## 6 **CONSEQUENCE ASSESSMENT**

This section describes the processes used for assessing the actual or potential consequences of an emergency at the Portsmouth DOE reservation. Initial and extended assessment actions are the responsibility of the USEC PSS as IC. Post-accident assessments are a shared responsibility between the IC, CM, and recovery manager (RM) if assigned. In support of emergency assessment in the EOC, the DOE and UDS response personnel will provide necessary assistance to the CM and staff during emergencies involving the DUF6 conversion facility and/or its operations, including construction activities and UF<sub>6</sub> cylinder operations.

Continuous assessment throughout the course of an emergency is necessary to effectively coordinate and direct the elements of the emergency response organization. The initial assessment actions are dictated, in part, by the nature and severity of the emergency. Emergency assessment provides an indication of the vulnerability of life, the environment, and property to injury or damage if an emergency occurs.

Appropriate mitigative actions are performed by response personnel who are technically trained and capable of implementing the facility's emergency plan and procedures. UDS personnel will also be trained to take appropriate mitigative actions to support emergency response personnel as necessary. UDS personnel will

provide guidance, as appropriate, to site emergency response personnel in order to ensure technical information is readily available. Site emergency procedures have been established by USEC to provide effective response to the various emergency situations. During any emergency condition, the primary concern is to minimize the impact to facility personnel and the general public. By initiating prompt protective actions such as evacuating personnel in the immediate incident area(s) and controlling access to the surrounding accident vicinity, consequences to facility workers as well as the general public are minimized. Additional information on protective actions is provided in Section 7.0, Protective Actions.

## **7 PROTECTIVE ACTIONS AND REENTRY**

### **7.1 *Protective Action Guides and Emergency Response Protective Guides***

During emergency situations, the USEC IC or CM must determine the best possible means to limit exposure of onsite and offsite personnel to potential or actual threats, such as radioactive or toxic materials that may be accidentally released to the environment. Guidelines are provided to limit the exposure of personnel in the case of accidental releases to the environment. These guidelines are prescribed corresponding to potential health effects and are called Protective Action Guides (PAGs) for radioactive materials and Emergency Response Planning Guidelines (ERPGs) for hazardous materials. Emergency response procedures have been developed for the protection of emergency workers and other onsite and offsite personnel. In addition, the UDS facility/employee EAP provides emergency response and protective actions to be taken by facility personnel, including visitors, in emergencies involving or impacting construction activities, the conversion facility site or UF<sub>6</sub> cylinder operations.

This section describes the protective actions developed to limit exposure of personnel and the public following an emergency on the Portsmouth DOE reservation. Protective action decision-making and implementation for onsite personnel are the responsibility of Portsmouth site authorities. During unlikely emergencies requiring protective actions to be implemented offsite, appropriate offsite authorities, primarily Pike County Office of Emergency Management, are responsible for implementing offsite protective actions to protect the general public.

Exposure guidelines for radiological emergencies are consistent with the Environmental Protection Agency's Protective Action Guides (PAGs) summarized in EPA 400-R-92-001, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*. Exposure guides for toxic/hazardous chemicals are consistent with the Emergency Response Planning Guides (ERPGs) established by the American Industrial Hygiene Association for extremely hazardous chemicals. USEC has developed site emergency response procedures to implement radiological and toxic/hazardous chemicals exposure guidelines consistent with the EPA PAGs and American Industrial Hygiene Association's ERPGs.

Although radiological exposures in excess of the normal administrative limits may be authorized, all exposures are kept ALARA.

For hazardous material/toxic gas release incidents, the IC and site emergency response personnel will determine the area with an atmospheric concentration of gas that exceeds the ERPG limits for the involved chemical(s) and takes appropriate

protective and mitigative response actions. USEC emergency plan implementing procedures provide the emergency response planning guidelines for the exposure limits to the applicable toxic gases/hazardous materials on the Portsmouth site.

## **7.2 *Monitoring and Decontamination of Personnel***

USEC has made provisions for 24-hour-per-day capability to determine uranium uptakes received by their emergency response personnel. Personnel who may be required to respond to the scene of an emergency are required to wear thermoluminescent dosimeters (TLDs). Emergency worker dose records are maintained in accordance with USEC radiological protection procedures.

Onsite personnel decontamination facilities for emergency conditions are equipped with decontamination material and necessary supplies. The primary means of decontamination is through the use of equipment and supplies carried on emergency response vehicles.

All personnel exiting from a radiologically controlled area are monitored for contamination. The instruments used for this monitoring procedure are portable contamination survey instruments. In situations when personnel contamination is detected, preventive measures must be initiated to mitigate the possibility of the spread of contamination. A member of the site health physics group will supervise any decontamination effort.

## **7.3 *Personnel Evacuation and Accountability***

Protective response for onsite personnel (including visitors and subcontractor personnel) includes alerting, assembly and accountability, sheltering-in-place, evacuation, monitoring, and decontamination. As previously described, the primary concern is to minimize the impact to facility personnel and the general public.

When an emergency situation impacting construction activities, the DUF6 conversion facility or UF<sub>6</sub> cylinder operations is recognized, personnel are advised immediately via public address system, telephone, and/or two-way radio. Whenever it is determined that a threat to the safety of facility personnel exists, an evacuation from the affected area is ordered by the USEC PSS/IC, CM, and/or the UDS LED and emergency wardens. The evacuation alarm and announcement, including any special instructions, is sounded over the site's public address system, telephone and/or 2-way radio.

At the discretion of the PSS/IC, CM, or UDS LED, facility personnel, visitors and subcontractors will proceed to an evacuation assembly area designated in the UDS facility/area EAP, or as directed by the PSS/IC, CM, or UDS LED. Directions on the specific evacuation routes will be provided by site emergency response officials, as necessary. The appropriate decision of an evacuation assembly area and evacuation route is determined based upon facility conditions, wind direction, and weather.

Emergency situations include natural events, such as severe weather emergencies and earthquake events. Site emergency plan implementing procedures include response actions to be followed in these situations. The UDS facility EAP also contains specific instructions for conversion facility workers, including visitors, to follow during natural phenomena incidents impacting the UDS site.

During an emergency, one of the most probable protective actions for facility personnel, including contractors and visitors, is evacuation of an area or site. In the event of an evacuation, it is essential to know that personnel have been positively located or accounted for. This must be exceptionally dependable, since search and rescue operations may be initiated if a person(s) is determined to be missing.

Site emergency plan implementing procedures on accountability provide the framework to ensure a prompt and accurate accountability of facility personnel during incidents involving the health, safety, and security of employees. To ensure proficiency on roles and responsibilities, site personnel participate in periodic accountability drills.

Site employees and subcontractor personnel are trained on actions to be taken in an emergency before their work assignments. The training includes instructions on methods of notification and the required actions in the event of an emergency, and is included as part of the UDS General Employee Training program.

If an accountability reveals a missing person in an area impacted or potentially impacted by the emergency, the IC may assemble a search and rescue team made up of members of the field emergency response organization. The search and rescue team will obtain information on the latest known location, and a search of likely areas is conducted until missing persons are located. On-scene direction of the search and rescue teams is provided by the IC, or designee. Teams are thoroughly briefed prior to any entry on their specific mission, route of ingress/egress, area of danger, personal protective clothing/equipment required, and stay times associated with control of exposure to radioactive or hazardous materials.

#### **7.4 Use of Protective Equipment and Supplies**

Emergency response personnel entering an area during an emergency where airborne concentrations of contaminants are considered immediately hazardous to life or health, or potentially immediately hazardous to life or health, are required to wear appropriate protective clothing and self-contained breathing apparatus.

Personnel assigned emergency response tasks requiring the donning of protective equipment maintain communications with the IC, or designee, via the facility radio system, either by hand-held radios or radios within the self-contained breathing apparatus. Protective clothing and other required personal protective equipment is available throughout the facility at pre-designated areas. Emergency personnel receive training on donning and utilizing specific protective clothing and related equipment. Section 12 describes the emergency management-training program.

Emergency kits and other supplies are used to provide monitoring equipment, protective clothing, and respiratory equipment for individuals arriving or remaining at the facility during certain emergency situations. These supplies are on emergency vehicles. Specific procedures dictate the requirements for use of this equipment.

#### **7.5 Contamination Control Measures**

The primary means of contamination control utilized onsite is evacuating applicable areas affected, or potentially affected, by the event. Controlling access to and removing non-essential personnel from the areas impacting the incident area provides the most effective measure for site contamination control.

The evacuation procedure is intended to be implemented and completed prior to, or as soon as possible after, releases occurring onsite. Monitoring and decontamination stations are established at designated areas when directed by the IC, or CM. USEC field emergency response personnel perform necessary monitoring and decontamination in accordance with site emergency procedures.

#### **7.6 Offsite Protective Actions**

The USEC CM is responsible for ensuring that timely recommendations for protective actions reach appropriate local and state officials. Decisions regarding the issuance of protective action recommendations offsite are to be based on accident assessment and a thorough understanding of the actual and potential facility/area conditions. These recommendations can take the form of sheltering in place, evacuation, or advisories that no action is needed.

County officials are responsible for determining and recommending protective actions for the public in potentially impacted areas. If a release of material exceeds the DOE reservation boundary, site emergency response personnel provide recommendations based on accident assessment to aid the county in the decision-making process.

During the construction phase of the DUF6 conversion facility, the UDS facility and operations will have no postulated accident conditions that will require any protective action off the DOE site. For DOE UF<sub>6</sub> cylinder yard operations and maintenance activities the current EALs and protective actions are being adopted. When the conversion facility is preparing to begin initial facility operation, pre-determined protective actions, including possible offsite protective action recommendations will need to be developed in conjunction with the new facility EALs as discussed in Section 4.

## **8 EMERGENCY MEDICAL SUPPORT**

The Portsmouth site maintains medical coverage consistent with the activities being conducted onsite. In an emergency, off-duty medical personnel are notified and directed to required locations as needed. The USEC PSS notification procedure includes alerting appropriate occupational health services and medical personnel in the event of emergencies ranging from industrial accidents to toxic or radiological releases. A summary of facility medical resources follows.

A facility medical facility is maintained by USEC onsite during the day shift, excluding weekends and holidays. This facility has the supplies, equipment, and personnel to treat most injuries. This includes capabilities for treatment of contaminated individuals including: a shower for contaminated ambulatory patients, radiation survey instruments and decontamination supplies. This facility is located within the security protected area fence. Medical personnel assess patient condition, provide necessary emergency care, and determine appropriate supplemental treatment.

USEC health services personnel are available during the day shift hours with facility fire fighters providing emergency medical coverage the remainder of the time. USEC health services personnel may be called to respond onsite during off-shifts, as deemed necessary.

UDS employees and UDS subcontractor personnel may be treated at the facility medical facility with fire services personnel acting as the security escorts.

In the event of a serious incident on the Portsmouth DOE reservation requiring medical treatment, local hospitals have agreed to provide the required assistance. The hospitals are equipped to handle contaminated injuries as well as injuries not related to contamination or over exposure. Upon request from the hospitals, USEC health physics personnel are dispatched to assist in contamination control, and decontamination of the patient(s), hospital staff, and hospital facilities/equipment. Letters of Agreement between the hospitals and USEC have been obtained to document these arrangements.

Injured employees are normally transported to the onsite medical treatment facility using a facility ambulance. An onsite ambulance normally provides transportation of injured persons to an offsite hospital. In the event that an onsite ambulance is unavailable, the local offsite ambulance service provides the transportation of injured persons to an offsite hospital.

Contaminated injured persons are decontaminated prior to transport if medical conditions permit. In the event that contaminated injured persons must be transported, contamination control materials and measures are taken to protect response personnel and to prevent contaminating the ambulance.

## **9 EMERGENCY TERMINATION AND RECOVERY**

During any emergency involving conversion project assets, the immediate action is directed toward limiting the consequences of the incident in a manner that affords the maximum protection to site personnel and the general public. Once the corrective and protective actions have established an effective control over the situation, and emergency conditions no longer exist, the emergency response shifts into the recovery phase that is managed by UDS personnel.

It is the responsibility of the CM, or PSS, in coordination with DOE and UDS site management to determine when the recovery phase of the emergency can be initiated. The following Portsmouth site emergency termination criteria are considered, when appropriate to the circumstances, prior to initiating recovery:

- If classified as an emergency, event conditions no longer meet any EAL.
- The affected facility/area is in a stable condition and can be maintained in that condition, indefinitely.
- Fire or other similar emergency conditions no longer constitute a hazard.
- Releases of hazardous materials to the environment have ceased or are controlled.
- Discussions with the on-scene emergency response organization, DOE site lead, UDS management, and appropriate offsite agencies if necessary, do not identify a valid reason to continue in any emergency classification.

### **9.1 RECOVERY**

The nature and extent of the emergency determines what recovery operations are required and the extent of the recovery organization that must be formed. A recovery plan must be flexible enough to adapt to the existing conditions. It is not

possible to anticipate in advance all of the conditions that may be encountered as a result of the emergency. General principles are addressed in this section that serves as a guide for developing a flexible plan of action.

Recovery includes those actions necessary to return the incident site and the surrounding environment to their pre-emergency condition.

The conduct of recovery operations may include the following activities appropriate to the type of emergency and post-emergency situation:

- Development of special procedures and training to meet requirements of recovery operations
- Monitoring for hazardous materials contamination.
- Control and decontamination of site buildings or the environment.
- Public and media releases.
- Dissemination of information on hazardous material releases and meteorology to the applicable State agencies

UDS is responsible for planning and implementing recovery activities for Portsmouth DUF6 Conversion project emergencies. The Portsmouth DOE site lead is responsible for ensuring the adequacy and appropriateness of recovery operations. Planning for recovery should address the recovery strategy, recovery organization assignments, and any logistics support needs.

## **9.2 *Recovery Organization***

Prior to termination of an emergency that impacts conversion project activities and deactivation of the emergency response organization, a UDS recovery organization is established to implement recovery plans. This organization is managed by a recovery manager who has overall responsibility for recovery activities in restoring the facility/area to normal conditions.

The recovery manager is appointed by and reports to the UDS conversion plant manager. Responsibilities of the recovery manager include the following:

- Direction of the transition from emergency response organization to the recovery organization
- Overall management of the recovery effort
- Coordination of interactions with vendors and contractors
- Approval of special procedures and related training
- Interfacing with offsite federal, state, and local officials
- Review of press releases

## **9.3 *Resumption of Normal Facility Activities***

A final briefing is held to discuss resumption of normal facility activities and to report on recovery operations for applicable site recovery organization personnel, the DOE site lead, and state and local authorities if necessary. All documentation of recovery operations is collected and retained by UDS for permanent storage.

# **10 EMERGENCY PUBLIC INFORMATION**

The Emergency Public Information Program provides the framework to ensure timely and accurate information to the media and general public in the event of an emergency involving the Portsmouth DUF<sub>6</sub> Conversion facility project. During the initial phase of an emergency, the decision is made by UDS management to activate the company's emergency public information system which consists of an interim point of contact determined by the Portsmouth DOE site lead and UDS management representatives, or their respective designees, responding to the Portsmouth site EOC, and the activation of the Joint Public Information Center (JPIC). Initially, a pre-approved press release will be made by the EOC informing the media and public of the situation and that the JPIC is being activated. Subsequent press releases are generated by UDS personnel and approved jointly by UDS management, CM and the DOE site lead, or their designees. Information is released as soon as it is available and approved.

### **10.1 Policy**

When emergencies may affect onsite personnel, public health and safety, or the environment, it is DOE's policy to provide accurate and timely information to employees, the public, and the news media, as necessary. Except for classified information, DOE maintains an open information policy in releasing accident or other emergency information.

### **10.2 Overview**

Plans, procedures, trained personnel, and equipped facilities are available to provide rapid facility response and sustained information dissemination capabilities for a wide range of incidents in which a high potential for offsite interest or inquiry exists. These plans and procedures provide for the coordinated release of relevant incident-related information to facilitate press-reporting responsibilities and to inform the public.

### **10.3 Concept of Operations**

The UDS Conversion Plant Manager, or designee, is available 24 hours a day to be reached by the USEC PSS for notification of abnormal facility conditions and/or activation of the EOC. UDS management assesses the potential for public interest in events and recommends an appropriate response to inquiries or media advisory.

During an emergency involving UDS operations/facilities and when the EOC is activated, UDS personnel will be escorted to the site EOC, and assess the need for news and photo releases, news conferences, interviews, and activation of the JPIC. Statements and releases to the media concerning emergency events are prepared by UDS site management with assistance provided by other EOC and/or JPIC personnel. UDS news releases are reviewed and approved by the DOE site lead, CM and UDS site management. If the JPIC is activated, approved news releases and statements are sent to the JPIC to be coordinated with other federal, state, county, and local information officials (as appropriate to the emergency) before release to the news media.

News conferences are held in a designated briefing room at the JPIC with federal, state, and local officials as necessary. Federal, state, and local officials will discuss their response to the emergency and any recommended protective actions for the public. The UDS spokesperson at the JPIC provides information regarding Portsmouth DUF<sub>6</sub> Conversion facility project emergency conditions. Site

management representatives from UDS and the DOE site office assist the UDS spokesperson as needed.

## **11 EMERGENCY FACILITIES AND EQUIPMENT**

Emergency facilities, equipment, and materials are established and maintained to adequately support emergency response operations. Response activities will be coordinated at the emergency facilities required to be activated for each particular classification. These facilities and associated equipment will be used to coordinate and manage response as well as to assess and monitor functions. Additional facilities provide for specific response activities, such as security, decontamination, medical support, and media interface.

Equipment includes information management and communication systems that are capable of ensuring all required notifications of emergency events and all necessary exchanges of information, including dissemination of emergency protective actions that may be required.

Emergency response facilities are activated by Portsmouth site emergency authorities, such as the PSS or CM, as needed, to provide direction and control, offsite resource coordination, and public information for emergencies occurring onsite. Facilities are declared operational when minimum staffing is present and vital equipment is operational, as outlined in procedures. The following are descriptions of facility locations, composition, activation criteria, and functions.

### **11.1 Emergency Facilities**

The Plant Control Facility (PCF), located in building X-300, is used to conduct initial assessments of abnormal facility conditions, notifying site emergency response personnel, making initial required emergency notifications, and implementing onsite protective actions. Response actions of the PCF staff are directed by the USEC PSS. The PSS, or designee, provides overall command and control of facility emergencies prior to the site EOC being declared operational.

The on-scene command post, established by USEC, is a distinctly marked vehicle or specific area equipped with communications capabilities and other resources required to manage the incident. The command post provides the IC and emergency response personnel with a location as close as possible to the actual scene from which they can operate and assess the situation. Uncontrolled events, such as meteorological changes or escalation of the emergency, may cause the relocation of the command post.

The EOC is the onsite facility for the overall management of the emergency response. The Portsmouth site EOC is a dedicated facility located within the limited area in Building X-1020. It contains appropriate instrumentation, displays, and communications equipment and is the primary facility for coordinating onsite response and mitigation and offsite interface activities. Designated UDS, or UDS representatives, and DOE site office personnel respond to the EOC upon activation to provide assistance and advice to the USEC CM and EOC staff.

The EOC is activated by the PSS, or designee, for emergencies classified as an alert or SAE, and at the discretion of the PSS, may be activated for less severe incidents, i.e., events that may be categorized as a DOE facility operational emergency. Upon

activation, the EOC provides coordination and management for the overall facility emergency response, and communicates with DOE and federal, state, and local organizations. The USEC CM directs EOC activities.

EOC personnel are responsible for performing the following: emergency notifications to and technical interactions with offsite federal, state, and local officials; generation of emergency information for public information activities; ensuring required support to the incident scene; and coordination of support for onsite response and mitigation.

USEC has planned for and has established an alternate EOC in the unlikely event that the primary EOC, the X-1020 building, becomes uninhabitable due to a radiological/toxic materials release. The requirements, responsibilities, and activities pertaining to the activation of the alternate EOC are described in USEC emergency procedures.

The alternate EOC is located in the X-300 PCF. The USEC mobile communications vehicle may also be used as an alternate EOC, if needed.

EOC documentation includes emergency plans and implementing procedures, facility operations procedures/manuals, site safety analysis reports, administrative procedures/manuals, technical/equipment/manufacturers manuals, and other facility/facility drawings.

The JPIC, located at the Word Alive Fellowship. The JPIC is the designated location for the dissemination of official information about the emergency to the media and public. The JPIC provides for the coordination of information with interfacing federal, state, and local organizations and spokespersons, news releases and media briefings, and workspace for site personnel, interfacing organization personnel, and representatives of the news media.

JPIC operations are described in USEC emergency plan implementing procedures.

## **11.2      *Emergency Equipment***

See Section 5.2, Communications, for a complete description the Portsmouth facility communications systems.

Emergency monitoring equipment is maintained onsite for normal and emergency response use. Designated emergency vehicles responding to the scene contain necessary emergency equipment and supplies and ensure that radiological monitoring equipment are readily available to emergency personnel.

In addition to radiological monitoring equipment, the site maintains emergency monitoring instrumentation for chemically toxic material releases. These instruments are maintained in dedicated emergency response kits and will also be supplied from USEC's inventory of routinely used monitoring equipment. Equipment to monitor toxic chemical materials is also located on designated emergency vehicles. The dedicated emergency instruments are listed in applicable USEC emergency procedures.

The primary source of meteorological information is the site's weather monitoring system consisting of a tower with meteorological sensors at the ground level, 10-meter, 30-meter, and 60-meter elevations, a data terminal, and a data acquisition system. The data is displayed in the PCF and displayed and recorded in the EOC.

Weather forecasting information is also available at the X-300 PCF via commercial telephone call to the National Weather Service located in Wilmington, Ohio. Weather forecasts are used to inform Portsmouth site personnel of impending related hazards, principally driving hazards, and may affect the scheduling of proposed facility activities/operations. Meteorological data is used to ensure safe emergency scene response (from upwind direction), facilitate plume dispersal modeling, and to develop appropriate protective action recommendations in the event of an airborne release.

## 12 EMERGENCY MANAGEMENT PROGRAM ADMINISTRATION

This section describes the provisions and responsibilities established for the administration of the Portsmouth UDS EM program. The UDS conversion plant manager, or designee, has overall responsibility for assuring the program meets designated emergency management requirements.

### 12.1 *Emergency Management Program Administrator*

UDS has the responsibility for managing and implementing the program within the requirements of DOE on emergency management program implementation. UDS has designated an individual to serve as the EMC for the Portsmouth DUF6 conversion project.

The Portsmouth DOE site office is responsible for providing oversight of the UDS emergency management program. The UDS EM coordinator is delegated the overall responsibility for implementation of the UDS emergency management program. The responsibilities of the EM coordinator include the following:

- Coordinate the Portsmouth DUF6 conversion project emergency management program
- Implement emergency management program policies and procedures
- Develop, coordinate, and maintain administrative procedures for the emergency management program
- Develop and maintain the Portsmouth DUF6 conversion project emergency plan in compliance with applicable regulations
- Ensure an adequate facility emergency support organization is established and maintained
- Perform surveys, reviews, and evaluations to ensure facility emergency management program requirements are being maintained. This includes reviewing the USEC emergency management services provided to UDS in accordance with contractual specifications
- Coordinate facility drills and exercises
- Coordinate applicable emergency management training
- Coordinate the resolution of emergency management program open items
- Review UDS activities and facilities to identify hazards and ensure consequence assessments
- Develop and administer a budget to support EM program objectives

- Serve as point-of-contact with USEC emergency management and PSS office.

## **12.2 Document Control**

The Portsmouth DUF6 Conversion project EP is reviewed annually and updated by revision when necessary. The EP is approved by the appropriate UDS management. Emergency management procedures developed by UDS, to be reviewed and updated as necessary. The emergency plan and procedures are maintained and distributed as official company documents. The updates of the plan and procedures shall incorporate necessary changes to correct deficiencies identified in emergencies, training, drills, and/or exercises. Emergency plans developed by other Portsmouth facility organizations, such as USEC and other DOE contractors, and participating offsite organizations and agencies are reviewed as requested, or as necessary.

The EM coordinator is responsible for coordinating reviews and audits of the emergency plan and related procedures.

## **12.3 Emergency Management Training and Drills**

The EM training and drills ensure that facility personnel are prepared to respond, manage, mitigate, and recover from emergencies associated with Portsmouth DUF<sub>6</sub> conversion project site operations. The program includes both classroom instruction and hands-on experience. Participants include personnel assigned to the ERO (i.e., EOC and JPIC cadres, Local Emergency Directors, facility emergency wardens, etc.), and general employees. Both initial and periodic refresher training is provided for the instruction and qualification of all personnel (primary and alternate) comprising the ERO.

General training for general employee response is included in both the General Employee Training (GET) Program and the facility EAP program. Emergency-related information includes emergency awareness, warnings and alarms, emergency response actions, including protective actions, evacuation, and accountability.

UDS emergency response/support personnel assigned to the EOC and JPIC are required to complete initial and biennial emergency response overview training. Emergency training requirements for UDS emergency personnel are defined in the appropriate UDS emergency management administrative procedures.

USEC provides emergency management-related training to the PORTS onsite emergency response organization and to the offsite response organizations in accordance with USEC emergency plans and procedures.

Annual drills are conducted to familiarize employees with protective actions, such as evacuation and take-cover. A drill is a supervised "hands-on" instruction session for individuals or teams that develops, tests, or maintains a specific operational or emergency response capability. Drills are conducted to familiarize employees with appropriate emergency response actions, such as protective actions. Drills may be used to prepare for exercises as well as to resolve deficiencies or develop improvements in specific functional areas. They are also used to develop skills and maintain proficiency among members of the ERO.

A coordinated program of drills and exercises is an integral part of an emergency management program. Emergency drills and exercises are conducted to develop, maintain, and test response capabilities of site emergency personnel, facilities, equipment, procedures, and training. The UDS EMC has responsibility for oversight of the UDS emergency management drill and exercise program/activities.

UDS management and supervisors are responsible for ensuring employees, and sub-contractors under their supervision, are available to participate in periodic drills and/or exercises, including the critiques. Personnel are required to participate in drills and exercises in a safe and realistic manner.

The UDS EMC is responsible for proper scenario development, establishing a planning schedule, developing the scenario, and identifying participants, controllers, and evaluators for drills and exercises conducted for the conversion facility. The UDS EMC, or designee, may participate in the planning and conduct of other site drills and exercises in coordination with the USEC emergency management organization.

#### **12.4 Exercises**

An emergency management exercise program will be established and implemented for the DUF6 conversion facility once the DOE UF<sub>6</sub> cylinder yard responsibilities are assumed by UDS. The program will validate all elements of the emergency management program over a five-year period. UDS will conduct a minimum of one exercise annually. Exercises will have specific objectives and will be fully documented in an exercise scenario package. The exercise scenario will contain a pre-planned description of the accident to be used and prepared accordingly to the scope and objectives of the exercise. Each scenario describes facility-specific emergency events that serve as the basis for emergency response actions. Scenarios are varied from exercise to exercise and are designed to minimize simulation. No scenario information is given to participants prior to an exercise.

A control group shall be established for each exercise to ensure that events occur that addresses the objectives of the exercise. An evaluation group shall be established for each exercise to assess the performance of the exercise participants against the objectives. Exercise controllers and evaluators are provided training on proper conduct of emergency exercises. This training includes information on safety precautions, scenario messages, simulated actions, participant interactions and controller input, evaluation methodology, and critique format.

Exercises include a critique process to provide initial impressions of accomplishments and shortcomings discovered during the exercise. Program improvements and corrective actions identified during actual emergencies or during drills and exercises are incorporated into the UDS emergency management program.

USEC conducts an exercise biennially for the gaseous diffusion facility to test and demonstrate an integrated emergency response capability involving offsite response organizations, including DOE. UDS and DOE site office personnel may participate in USEC's emergency management exercises

#### **12.5 Self Assessment**

Periodic assessments of the UDS emergency management program are conducted to ensure adequate and effective program functions. The assessments may be in

the form of independent assessments, surveillances, and management assessments. The scope of the assessments are to include the emergency plan and related implementing procedures; EM training activities; drills and exercises; and emergency facilities, equipment and supplies.

The UDS EMC shall respond to adverse assessment findings of the emergency management program by providing the proposed corrective action, schedule for corrective action, and measures to prevent finding recurrence. Assessment findings shall be entered into the management tracking system and tracked until closure.

In addition, the EMC, by virtue of his involvement with the UDS emergency management program, provides an ongoing review.

#### **12.6      *Maintenance and Inventory of Emergency Facilities, Equipment, and Supplies***

USEC is responsible for maintaining adequate equipment and supplies in support of emergency response operations, and conducting periodic inventories and inspections to ensure equipment and facilities are maintained in operable status for emergency response personnel to perform their respective duties and responsibilities. This includes equipment and materials for radiological and toxic monitoring, protective clothing, fire-fighting equipment, emergency medical supplies, sampling equipment, respiratory protection equipment and emergency air supplies, damage control materials, dedicated spare parts, radios, telephones, vehicles, and administrative supplies. Emergency facility and equipment maintenance is described in USEC emergency plan implementing procedures.

The UDS EM coordinator ensures emergency equipment and supplies in support of facility responses, i.e., employee/facility EAPs, evacuation route maps, spill response kits, first aid/medical supplies, communications equipment, are available and maintained in accordance with Appendix C, *UDS Emergency Planning*.

#### **12.7      *Emergency Readiness Assurance Plan***

An emergency readiness assurance plan (ERAP) is developed that addresses planning and preparedness for emergency response at the Portsmouth DUF6 conversion facility site. The ERAP is submitted to the DOE site office by September 30 of each calendar year. The annual ERAP covers a planning cycle of five fiscal years from the date of the updated ERAP.

The ERAP serves as the baseline document for emergency readiness assurance evaluations and as a planning tool to identify and develop needed resources and improvements. An updated ERAP highlights any changes in planning bases, organizations, exemptions, etc., from previous ERAPs, as well as compare actual achievements to goals, milestones, and objectives.

#### **12.8      *Letters of Agreement***

Letters of Agreement with offsite support organizations and agencies are administered and maintained by USEC.

### **13      *Supporting Information***

#### **13.1      *Acronyms***

ALARA                      As Low As Reasonably Achievable

CFR	Code of Federal Regulations
CM	Crisis Manager
DOE	U.S. Department of Energy
DOE-OROC	DOE-Oak Ridge Operations Center
DOT	U.S. Department of Transportation
DSA	Documented Safety Analysis
EALs	Emergency Action Levels
EAP	Employee Emergency Action Plan
EAS	Emergency Alerting System
EM	Emergency Management
EMHA	Emergency Management Hazards Assessment
EMS	Emergency Medical Services
EMTs	Emergency Medical Technicians
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPIPs	Emergency Plan Implementing Procedures
EPZ	Emergency Planning Zone
ERAP	Emergency Readiness Assurance Plan
ERO	Emergency Response Organization
ERPGs	Emergency Response Planning Guidelines
ETTP	East Tennessee Technology Park
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Teams
GET	General Employee Training
HQ	DOE-Headquarters
IC	Incident Commander
ICS	Incident Command System
JPIC	Joint Public Information Center
LED	Local Emergency Director
MSL	Mean Sea Level
NAERG	North American Emergency Response Guidebook

NRC	Nuclear Regulatory Commission
NWS	National Weather Service
ORO	DOE Oak Ridge Operations
OROC	DOE Oak Ridge Operations Center
PA	Public-Address System
PAGs	Protective Action Guidelines
PARs	Protective Action Recommendations
PAs	Protective Actions
PIO	Public Information Officer
PORTS	Portsmouth Gaseous Diffusion Plant
PPPO	Portsmouth-Paducah Project Office
PSS	Plant Shift Superintendent
PWS	Public Warning System
RCM	Resident Construction Manager
RCRA	Resource Conservation and Recovery Act of 1976
RM	Recovery Manager
RQ	Reportable Quantity
SAE	Site Area Emergency
SNM	Special Nuclear Materials
TLD	Thermoluminescent Dosimeter
UDS	Uranium Disposition Services
USCG	U.S. Coast Guard
USEC	United States Enrichment Corporation
USQD	Unreviewed Safety Question Determination

### **13.2 Definitions**

The following definitions apply to this Emergency Plan and applicable Appendices.

Accident. A deviation from normal operations or activities associated with a hazard that has the potential to result in an emergency.

Agency. Any organization that acts in the place of a government and by its authority (e.g., the Federal Emergency Management Agency is an agency of the Federal Government).

Consequence. The result or effect (especially projected doses or dose rates) of a release of radioactive or hazardous materials to the environment.

Consequence Assessment. The evaluation and interpretation of radiological or other hazardous materials measurements and other information to provide a basis for decision making.

Contractor. A non-Federal party to a DOE contract, engaging in activities or operations involving hazards which could potentially affect the health and safety of employees or the public or the quality of the environment.

Drill. A supervised, hands-on instruction period intended to test, develop, and/or maintain a specific emergency response capability. A drill is often a component of an exercise.

Emergency. An emergency is the most serious event and consists of any unwanted operational, civil, natural-phenomenon, or security occurrence which could endanger or adversely affect people, property, or the environment. (For the purpose of this Emergency Plan, an emergency is an abnormal event impacting the UDS site/activities requiring time-urgent emergency response actions by the site's (USEC) emergency response organization to mitigate and/or protect UDS site personnel and/or facilities.)

Emergency Action Level (EAL). Specific, predetermined, observable criteria used to detect, recognize, and determine the appropriate class of an emergency. An EAL can be: an instrument reading; an equipment status indicator; a measurable parameter, on site or off site; a discrete, observable event; results of analyses; or another observed phenomenon that indicates entry into a particular emergency class.

Emergency Management. The development, coordination, and direction of planning, preparedness, and readiness assurance activities.

Emergency Operations Center (EOC). A central facility from which management and support personnel carry out coordinated emergency response activities. The emergency operations center may be a dedicated facility or office, conference room, or other pre-designated location having appropriate communications and informational materials to carry out the assigned emergency response mission and located, where possible, in a secure and protected location.

Emergency Plan A brief, clear, and concise description of the overall emergency organization, designation of responsibilities, and procedures, including notifications, involving coping with any or all aspects of a potential credible emergency.

Emergency Readiness Assurance Plan (ERAP). A plan to ensure that emergency plans, implementing procedures, and resources are adequate and sufficiently exercised and evaluated.

Emergency Response Organization. The designated group(s) of personnel responsible for coping with and minimizing or mitigating the effects of any emergency.

Emergency Response Planning Guidelines (ERPGs). A hazardous material personnel exposure level or range which, when exceeded by a short term or acute exposure, will cause irreversible or other serious health effects in humans. The ERPGs are approved by a committee of the American Industrial Hygiene Association.

Event. Any real-time occurrence or significant deviation from planned or expected behavior that could endanger or adversely affect people, property, or the environment.

Exercise. A scheduled and planned large-scale activity that tests the integrated capability and most aspects of the emergency management program associated with a particular DOE facility.

Facility. Any equipment, structure, system, process, or activity that fulfills a specific purpose.

Hazardous Material. Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment.

Incident. Any deviation from normal operations or activities that has the potential to result in an emergency.

Offsite. The area beyond the boundaries of the Portsmouth DOE reservation.

Onsite. The area within the boundaries of the Portsmouth DOE reservation.

Protective Action. Physical measures, such as evacuation or sheltering, taken to prevent potential health hazards resulting from a release of hazardous materials to the environment from adversely affecting employees or the offsite population.

Protective Action Guide (PAG). A radiation personnel exposure level or range beyond which protective action should be considered. PAG values should reflect a balance of risks and costs to on site personnel, public health and safety, and the environment weighed against the benefits obtained from protective actions.

Recovery. Actions taken after a facility/area has been brought to a stable or shutdown condition to return the facility/area to normal operation/conditions.

**END OF DOCUMENT**